PROVINCIAL APPRENTICESHIP BOARD

THE FUTURE OF APPRENTICESHIP

A Report to
The Minister of Labour
Province of British Columbia
from
Provincial Apprenticeship Board

November 1984

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Province of
British Columbia

OFFICE OF THE MINISTER

Ministry of
Labour

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November 1984

THE FUTURE OF APPRENTICESHIP

The attached report has been submitted to me by the Provincial Apprenticeship Board.

At my request, copies of the report are being made available to all interested parties. As the future of apprenticeship is a matter of such importance to so many people I would very much appreciate receiving your written comments on the report.

R.H. McClelland
Minister

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A REPORT TO
THE MINISTER OF LABOUR
PROVINCE OF BRITISH COLUMBIA

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THE PROVINCIAL APPRENTICESHIP BOARD

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The Provincial Apprenticeship Board has brought this report together in a sequence designed to make clear what the Board means when it talks about apprenticeship, to explain why it undertook a study of the future of apprenticeship in British Columbia, and to set out in brief the key findings of the study before going into the more detailed full report.

For the details of questions addressed by the study and the basis for the Recommendations identified in the opening Summary of Key Findings, readers should see the main body of the report, beginning on Page 9.

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WHAT IS APPRENTICESHIP?

The Provincial Apprenticeship Board's study of "The Future of Apprenticeship" started from the basic premise that "apprenticeship" defines a specific and formalized skills training system.

In the Board's definition:

> **Apprenticeship is a system of supervised employment through which an individual learns a skilled trade or occupation. The apprentice learns practical skills and technical knowledge. The former are acquired through experiences working with journeymen already skilled in the trade; the latter is acquired usually through attendance at technical training classes.**

The Board is aware that many perceptions and expectations of apprenticeship exist. To further clarify what it means when it speaks of apprenticeship, the Board wishes to state what, in its view, **apprenticeship is not:**

> **Apprenticeship is not a system of job-creation; nor is it a catch-all solution to unemployment problems.**

As a system involving "supervised employment", apprenticeship includes both work and learning; an apprentice is an employee in a productive work environment and is expected to be productive as well as to learn.

In British Columbia, a formal apprenticeship system has been in place since 1935, when the province's original Apprenticeship Act was passed by the Legislature. The Act and pursuant regulations offer assurances of quality and consistency in this skills training.

An individual who graduates from an apprenticeship in a recognized trade receives a Certificate of Apprenticeship. The certificate is proof -- to the individual, employers and the public -- that the person named on the certificate has earned journeyman status in that trade by successfully completing the prescribed technical and practical skills training.

WHY THIS STUDY OF THE FUTURE OF APPRENTICESHIP?

British Columbia requires skilled trades people to help build, maintain and operate the businesses and industries which drive its economy. Everyone agrees on that, whether times are good or bad.

Five years ago, when British Columbia's economy was strong, the apprenticeship system's ability to meet a rising trade skills demand was tested. The principal challenge was to attract more candidates to apprenticeships, particularly in trades critical to industrial growth. By and large, the system met the challenge. The number of apprentices indentured in the province grew to a peak--in January 1982-- of 18,925, representing 1.8% of the work force.

Things have changed. During the last two years, the economic recession, superimposed upon technological change and new methods of training, has resulted in a whole new series of questions about the methods used to provide British Columbia with the trade skills it needs. The relevancy of the apprenticeship system was among the questions.

The questioning coincided with a decline in the number of apprentices indentured which now stands at about 12,000, or about 1% of the work force. The decline began in early 1982 with the world-wide economic recession and its substantial impact on British Columbia.

As the number of apprentices being laid off grew, the Board began to hear people ask whether apprenticeship remained a cost-effective method of skills training. Others asked whether it continues to be an appropriate method to meet trade skill demands when, by its very work-related nature, the number of people in apprenticeships is so closely tied to the ups and downs of economic activity. Some questioned whether apprenticeship remained valid at all in the face of the impact of technology on the workplace and on the tools used in training.

The Provincial Apprenticeship Board's principal objectives and obligations are to provide guidance and direction which will help to ensure that the province's needs for trade skills are met and that individuals have access to skills training which will enable them to obtain satisfying and rewarding employment.

In the face of the questions being asked, the Board felt impelled to find answers so that it could meet its objectives and obligations. It assigned a Task Force to canvass the subject. The Task Force heard from employers, trade unions, educators, apprentices and others. It brought to bear the considerable experience of the Board members themselves and, after a great deal of consideration, has prepared this report.

SUMMARY OF KEY FINDINGS

In its study of the Future of Apprenticeship, the Provincial Apprenticeship Board sought first to determine whether the apprenticeship system remains relevant in the process of meeting British Columbia's trade skills needs. The Board found that changes and improvements are needed to keep the system current, but that there is widespread agreement on the following:

*Apprenticeship remains a valid skills training system, valued by employers and individuals. It will have a long future in British Columbia.

*The present Apprenticeship System is fundamentally sound.

*At this time, the system is generally meeting the trade skills needs of employers in the province.

*For individuals in the apprenticeship system, the training is satisfactory and is doing a sound job of providing them with the desired trade skills.

*The product of the system, on the whole, is excellent; the quality of journeymen certified through British Columbia's formal apprenticeship training programs is second to none.

*The present apprenticeship system is capable of adjustment to meet future requirements of individuals, employers and the province as a whole--provided all parties carry out their roles and responsibilities effectively.

These conclusions are not those of the Board alone. They reflect the views expressed to the Board's Task Force.

Given this response from British Columbians, the Board is confident that adjustments can be made to keep the apprenticeship system current with technological and economic change so that it can continue to meet the needs of employers for trade skills and the requirements of individuals who pursue this course of vocational training to enhance their opportunities for career growth and job security.

One fundamental question continues to loom large, however, in the comments of those with whom the Board discussed the future of apprenticeship and with all members of the Board itself:

> Will the system train enough people to meet the trade skills needs of the province?

Clearly, the system trains well and it can train enough. The question is: will it? The Board's recommendations are aimed at making the answer "Yes".

Recommendations

The principal recommendations, described in greater detail in the following pages, include the following:

I. Future growth in apprenticeship training is most likely to occur among smaller employers.

> **Government should take the initiative in developing a mechanism to facilitate co-operative apprenticeship training programs among compatible groups of smaller employers.**

II. The need for expanded effective communication about apprenticeship will grow, both to encourage smaller employers to train and to cope with the larger audience created as more employers become involved in training. The Board has asked the Apprenticeship and Employment Training Programs Branch to have Apprenticeship Training Counsellors do more promotional work with employers to encourage them to train. In addition:

> **The Ministry of Labour should give priority to expanded and continuing communications programs designed to create wider understanding of the apprenticeship system, among employers and the public at large.**

III. Employers who train generally view training costs as an investment but they want their skills training to be cost-effective. They expressed concern that the cost of using training to meet such social goals as training the unemployed should not be imposed upon employers alone.

Government should retain the present division of costs involved in apprenticeship training and should assure employers that they will not be expected to bear the costs where government imposes specific conditions related to social objectives.

IV. There is a need for government to take certain training initiatives with social implications.

Government should facilitate the continued training of laid-off final-year apprentices in critical industrial trades through a program of simulated on-the-job training.

The Ministry of Labour should develop and administer a program for periods of economic downturn which will provide simulated practical skills training and first- and second-year technical training for individuals who, when employed and taken into a formal apprenticeship, would be more productive for their employers.

The Ministry of Labour should research and develop experimental programs of practical skills and technical training which, in times of economic downturn, could be used to offer the unemployed an alternate route to certified tradesman status.

V. There is a strong desire among employers and apprentices, for reasons of scheduling, cost, convenience and more effective employer-instructor communication, to have technical training more locally-based.

Government should introduce greater flexibility into the delivery of technical training by empowering the Ministry of Labour to deal directly with public education institutions in contracting for technical training.

VI. Entry-level training to help equip individuals for apprenticeships is desired by individuals and employers. The TRAC (for training access) program introduced in 1983 has potential, but further evaluation is necessary to ensure it is meeting industry needs.

The Ministry of Labour should ensure that the planned Ministry of Education evaluation of TRAC includes a thorough canvass of industry reaction.

Retraining and Upgrading

The Board's study heard many calls for means to ensure retraining and upgrading opportunities for individuals seeking to cope with change in the workplace.

"Retraining" was discussed in the context of new education and training for individuals displaced in their employment by technological change or economic impact. The Board sees this as more of a social matter to be dealt with in a broader context than apprenticeship.

"Upgrading" is viewed by the Board as training to bring an individual's skills up to current standards and to develop specialized skills covering specific job- or industry-related technology. The Board believes further study is required on the need for upgrading opportunity and has initiated such a study in conjunction with the Apprenticeship and Employment Training Programs Branch.

THE FUTURE OF APPRENTICESHIP

INTRODUCTION

The Provincial Apprenticeship Board's study of the Future of Apprenticeship in British Columbia canvassed the views of many organizations and individuals through two dozen meetings and as many written submissions, which are identified in Appendix A and Appendix B.

It included long and thoughtful consideration by members of the Board, whose personal experience with apprenticeship training is considerable and whose common objective, through the Board, is to help ensure that the skills training system in the province meets the needs of employers and the needs of individuals seeking to secure their employment future through an apprenticeship.

The Board's conclusion that the present Apprenticeship Training System can evolve, and in fact is evolving, on a progressive and continuing basis to successfully meet those needs in British Columbia is widely shared. The apprenticeship system in the province is fundamentally sound and, while change is necessary, the Board accepts the admonition of some Task Force study participants that "if it ain't broke, don't fix it".

One fundamental question continues to loom large with the Board and with many of the study participants: Will the system train enough people to meet the trade skills needs of the province? The present system trains well. It <u>can</u> train enough. And the Board's recommendations, proposals and actions are aimed at ensuring that it does.

The need for change is being addressed by the Board through the recommendations in this report and through the continuing use of the mechanisms which already exist in the apprenticeship training system.

What is Apprenticeship?

The Board defines "apprenticeship" as a system of supervised employment through which an individual learns a skilled trade or occupation by acquiring practical skills through experiences working with journeymen and acquiring technical knowledge usually through attendance at technical training classes.

The system in British Columbia today is more structured and formal than was the case in history where a son often apprenticed at his father's trade, learning the trade by working under the supervision of his experienced parent.

In the B.C. system today, the apprentice who graduates becomes a journeyman and, under the Apprenticeship Act, is certified to prove to all and sundry that he or she has successfully completed the prescribed practical skills and technical training.

What is a Journeyman?

Dictionaries describe the meaning of the word "journeyman" variously as one who has completed an apprenticeship in a trade, craft or skill and as one who is an experienced, qualified and competent worker. The word has basis in such phrases as "journey a day's work" and "paid by the day". Traditionally, it relates to society's requirement for skilled people who can move about, from job to job and often from employer to employer, to apply universal skills to a variety of tasks. Today's journeyman, in many cases, may stay a long time with the same employer, but still moves about from task to task applying his or her skills where needed.

In reading this report, these definitions--and particularly that of "apprenticeship"--will be useful. So will the following references to the apprenticeship system.

The formal apprenticeship system encompasses certain specified trades, generally those in which the apprentice learns transferable skills which can be applied to any number of specific tasks in jobs in any number of different businesses and industries. This is distinct from many other forms of work-related training, where the individual learns to do specific tasks which may have little or no application in another job or another business.

Transferable skills are involved, but the training environment varies with the nature of the employer's business. At the same time, while every certified journeyman has successfully completed practical skills and technical training to required standards, many will exceed the required standards, each to a degree which reflects the individual's abilities and desires to achieve.

Flexibility is Important

In such circumstances, flexibility in the delivery of training becomes a matter of considerable interest.

Study participants acknowledged that the formal apprenticeship system requires regulation to ensure consistency in the quality of the training it offers and in the product it produces. But they emphasized their desire to have the system sufficiently flexible to accommodate the differences in individual abilities to learn and the varying requirements of vastly different businesses and industries.

The Provincial Apprenticeship Board believes the present apprenticeship training system does have flexibility, perhaps more than most people realize. That flexibility, in fact, has made a significant contribution towards the present level of general satisfaction among the system's users, including individuals and employers who train.

Improvements are desired, nonetheless, and must be pursued to keep the system current with today's demands. The pursuit of improvements is an objective of this report, whose over-all goal is to ensure that the apprenticeship training system in British Columbia meets the province's needs.

ROLES & RESPONSIBILITIES

Who should accept the responsibility for training to ensure that the province's needs--both for trade skills and for the opportunity for individuals to acquire trade skills--are met?

The Board found widespread agreement that the responsibility to train apprentices lies with employers. It also found agreement that government leadership will influence employers to accept and carry out this responsibility.

The Board and study participants generally described the Roles and Responsibilities of the parties involved in apprenticeship training as follows:

a) Employers

Responsible to train sufficient numbers of journeymen for their requirements. The workplace continues to be the best place for an individual to get practical, on-the-job training and real hands-on experience.

b) Individuals

Responsible to make a commitment to be productive on the job and in the classroom.

c) Government

Responsible for encouraging employers to do serious manpower planning and then to coordinate the information to help identify general trends of demand for trade skills.

Responsible for creating a climate which encourages, and sometimes impels, employers to train and for ensuring that employers train sufficient numbers to meet the province's requirements.

Responsible for administration and regulation of the system, including: a) ensuring that technical training is scheduled, b) the validation of training and c) the certification of journeymen.

Responsible for the infrastructure necessary to make the system work, including the institutions where technical education is provided.

Responsible to ensure that the system operates on a cost-effective basis, which does not arbitrarily impose social costs (as distinct from training costs) upon employers who train.

The Board has found that employers generally are willing to accept the responsibility to train to meet their needs but they want to be reassured that they will have sufficient control over the demands of the training system to be sure their training will be cost effective. Government will have to expect to pay for training-system elements which are over and above what is needed to meet the needs of the employers.

Apprentices generally accept their responsibility to be productive on the job and in their technical training. The Board heard discussion about the financial role of the apprentice, who does not pay fees for the required technical training. The Board believes that, as taxpaying employees, apprentices are making a financial contribution toward education costs, probably reasonably in line with the financial contribution required of individuals taking other forms of post-secondary education and training.

THE NEED FOR MORE TRAINING

As noted above, the government role in apprenticeship is viewed by the Board and study participants as including not only the responsibility for administration and regulation of apprenticeship training, but also the encouraging of employers to do more training and to improve upon their forecasting of human resource needs.

More accurate projection of at least the general trend in demand for trade skills will assist the apprenticeship system in gearing up to meet longer-term requirements.

In the meantime, there is enough evidence of a need in the shorter term to make the Board and many employers share a concern that, without deliberate steps now to increase apprenticeship enrolment, the system may not meet the trade skills requirements of the British Columbia economy in the late 1980s.

In the past, immigration has been viewed as a method of responding to shortages of skilled personnel in Canada. With unemployment currently at unacceptably high levels and with the acceptance by industry that it has a responsibility to train, the Board strongly recommends that immigration not be used by the Government as a policy tool to respond to future needs for skilled workers. Immigration also should not be treated by employers as a manpower recruitment vehicle, or as a substitute for training.

In the wake of the recession of the last two years, British Columbia has an adequate supply of trade skills for the moment. Employers expect neither a large increase nor any further significant drop in the demand for trade skills. They agree that the present number of apprentices in training must, at the very least, be maintained in order to ensure replacement of trade skills lost through attrition. Retirements, deaths, individual decisions to try new employment paths and other influences will continue to remove journeymen from the work force.

The fact is, though, that the apprenticeship system in British Columbia is not enrolling enough new trainees at the present time to meet the needs created by attrition.

As this report is written, the number of apprentices hovers near 12,000. This would appear to be the minimum level which must be maintained. However, an intake averaging 500 per month is needed to sustain such a level of training. Recently, the intake has ranged between 200 and 400 a month--a significant shortfall. Heavier intakes at the beginning of the 1980s have resulted in today's enrolment bubble, with 65 per cent of all indentured apprentices clustered in third and fourth year training.

Many employers are willing to train to meet their own requirements but economic conditions have restricted in very real ways what they can invest in apprenticeship training right now.

The Board is aware of these circumstances and has kept them in focus in the preparation of this report.

The Board also recognizes that the present apprenticeship system, while fundamentally sound, may have to be augmented in future to meet the province's skills training needs. It believes it is timely now to look at alternatives to and variations from the structured, supervised and regulated learning process of formal apprenticeship, including such things as simulated practical skills training. That belief is reflected in this report.

RECOMMENDATIONS

The Board found agreement that apprenticeship policies and practices in British Columbia have generally served the province well up to now. If the objectives described in the foregoing are to be met, however, some change is essential and some new initiatives will have to be taken, especially to ensure that sufficient numbers of skilled trades people are available to meet the province's needs.

With this in mind, the Provincial Apprenticeship Board makes the following recommendations:

I. Training Growth and Small Employers

The structural change which has taken place in British Columbia's industry during the economic upheaval of the last two years has made it necessary to consider where future growth in apprenticeship is most likely to occur. The consensus is that much of the growth the province will require in apprenticeship training in the near- and medium-term future will take place among the smaller employers.

Individual small businesses which require trade skills and employ journeymen may not have the financial means to do a great deal of training. It is often the case, as well, that smaller employers do not have in their operations the range of employment tasks required to provide an apprentice with experience in all of the common skills of his or her chosen trade.

On the other hand, groups of small employers are capable of a co-operative effort which will facilitate effective training and, perhaps with some assistance from larger employers willing to provide some training to complete the work experience range, they can produce journeymen with well-rounded on-the-job experience.

If such groups of employers are to provide training in co-operative programs, government will have to take the leadership role and facilitate and fund the development. This will have to include a central mechanism (i.e., an employer association, joint employer-union entity or a government agency) to which the apprentices would be indentured and a means to co-ordinate and schedule a rotation of the apprentices in each pool among the participating employers.

The Board recommends that the Ministry of Labour take the initiative in developing a mechanism to facilitate co-operative apprenticeship training programs among compatible groups of smaller employers.

II. Communication

Promoting and selling the idea of apprenticeship training to smaller employers and to employers who up to now have not trained will require new emphasis on contact and communication. This promotion and selling will be more effective if it occurs against a background of greater public understanding of apprenticeship and its benefits.

It takes more effort to reach a larger number of smaller employers than to communicate with a few large employers and it follows that numbers alone will make the communications task grow.

The Board has asked the Apprenticeship and Employment Training Programs Branch to increase the level of promotional activities of its Apprenticeship Training Counsellors by expanding their opportunities to discuss apprenticeship training with various interested parties, but especially with employers who should be training.

The Provincial Apprenticeship Board, in its public consultation role, will continue to focus attention on the system and, in its ongoing activities, will continue its efforts to bring wider understanding of apprenticeship. In addition:

The Board recommends that the Ministry of Labour give priority to expanded continuing communications programs designed to create wider understanding of the apprenticeship system among employers and the public at large.

III. Training and Social Goals

Certain social objectives are implicit in apprenticeship training, if only in terms of equipping men and women for employment opportunities and job satisfaction. Occasionally, society expects apprenticeship training to meet more specific social goals, including continued training for apprentices who lose their employment in an economic downturn and the training of new apprenticeship candidates during such periods to ensure trade skills will be available to meet demands when economic growth resumes.

The Provincial Apprenticeship Board believes these are reasonable expectations, provided society accepts that the full cost of meeting them is not to be borne by employers alone and provided that the system is not expected to become a total solution to unemployment problems.

Suggested options for funding these kinds of costs range from direct government subsidization to creation of registered training funds to which employers and apprentices contribute. The Board believes there is a necessity, in economic downturns, for government to take some initiatives.

The Board recommends that:

a) Governments facilitate the continued training of laid-off final-year apprentices through a program of simulated on-the-job training;

b) The Ministry of Labour develop and administer a program for periods of economic downturn which will provide simulated on-the-job training and first- and second-year technical (classroom) education for individuals who, when employed and taken into a formal apprenticeship would be at the level of a second-year apprentice and thus more productive for, and more desirable to, employers; and that

c) The Ministry of Labour research and develop experimental programs of practical skills and technical training which, in times of economic downturn, could be used to offer the unemployed a route to certified tradesman status.

IV. Cost and Financing

As a rule, employers in British Columbia view training expense as an investment. The Board believes this is appropriate. In normal circumstances, the employer should pay the cost involved in training employees to meet the employer's trade skills requirements.

Clearly, there also is a role in apprenticeship training for government expenditure, if only because it is in the public interest for government to demand certain minimum standards be met. Something less than that may meet the needs of an employer, particularly in the technical training, but it would not meet the needs of the provincial economy nor would it necessarily serve the best interests of the individual. An employer often provides training which, in the most literal sense, goes beyond the explicit needs of that employer. Individuals being trained acquire transferable skills which they can and, in fact, often do, offer to other employers.

The general public interest is served by the apprenticeship training system, in that the process helps to ensure that the province has available the trade skills required to develop and maintain the businesses and industries which make its economy grow, ultimately to the benefit of the general population. In addition, there is a government responsibility to ensure that training opportunities are available to individuals so that they might acquire marketable skills which can bring them job opportunities and employment security.

In practice today, governments provide funding for post-secondary education, including institutions where much of the apprenticeship technical training is delivered. Governments also provide funds towards certain costs incurred by the individual apprentices, including those related to travel and living away from home to attend available institutions for the required technical education.

Study participants generally agreed that this division of costs is fair but said employers expect assistance in meeting training costs which reflect imposed conditions which are outside those normally a part of skills training to meet employer needs.

The Board recommends that Governments retain the present division of costs involved in apprenticeship training and assure employers that they will not be expected to bear the costs where government imposes specific conditions related to social objectives. The Board also recommends that, where Government finds evidence that employers generally are not making adequate training investment to meet the trade skills needs of the province's economy, Government will consider implementing incentives, including such options as subsidies, tax credits, mandatory training ratios, a training levy-grant system or a payroll tax for training.

V. Delivery of Technical Training

The Board believes it is timely to take steps which will provide an increasingly local base to the technical training that is part of an apprenticeship. In the discussion of this matter, employers and apprentices often cited factors of cost and convenience in expressing their desire for technical training that is more locally based.

The Board believes that moving in this direction will make the training system more flexible, more responsive, more socially-desirable and more cost-effective. A significant step, which would bring technical training to the local level on an increasing scale, is recommended below.

In terms of flexibility, the Board believes this step will accommodate industry which may want to schedule apprentice absences for technical training on a day-release or night-school basis rather than by the "block release" for periods of up to eight weeks at a time that is typical now. It will create a challenge for the educational institutions, bringing a number of benefits without sacrificing quality. One result will be flexibility in class size.

The recommended change will make the system more responsive by accommodating closer communication between the workplace and those who deliver technical training and by permitting the addition or deletion of training classes more readily to reflect economic change.

The change also will reduce the need for an apprentice to leave home and family for several weeks at a time to attend classes in another community where, in spite of training allowances, the cost of maintaining a second residence for the period of technical training is a drain on the apprentice's resources.

The Board is convinced that such results will mean more efficient delivery of technical training at lower cost to both the Ministry of Labour and to the participants (employers and apprentices).

The Ministry of Labour, through the Director of Apprenticeship, is empowered now to deal directly with private education institutions for technical training. Public education institutions are, and should continue to be the principal source of technical training in the apprenticeship system.

If the Director is empowered to deal directly with the public institutions, it will be possible and practical to tailor technical education more closely to the needs of employers and apprentices while maintaining provincial standards.

The result will be the more flexible, responsible, socially-desirable and cost-effective delivery of technical training mentioned above. Therefore:

The Board recommends that the Ministry of Labour, in order to enhance the carrying out of its mandate effectively, be empowered to deal directly with public education institutions in contracting for technical training.

VI. Preparatory Entry-Level Training

Study participants discussed entry-level training at some length. There was general agreement that such preparation is beneficial to individuals contemplating entry into an apprenticeship.

Attention was focussed upon the TRAC (for training access) program introduced in 1983. Community colleges and the Pacific Vocational Institute offer entry-level training designed to enhance an individual's opportunities to get a job and to get access to an apprenticeship.

Students have a "common core" study program which provides an overview of the skilled trades and some basic practical and theoretical training. They then take an "occupational core" program where course content is related to a family of skilled trades with certain common elements. This is followed by a "specialty" course related directly to a specific trade.

The entry-level training known as "pre-apprenticeship training" was discontinued about the time TRAC came into being. The former has not been replaced.

The Board has supported and continues to support the concept of the TRAC program as preparation for apprenticeship. Further evaluation is necessary, however, to ensure that TRAC is meeting employer as well as individual needs in relation to apprenticeship training.

The Board recommends that the Ministry of Labour ensure that industry reaction to TRAC as employment entry-level training is assessed when the Ministry of Education carries out an evaluation of TRAC during 1985.

PROPOSALS AND ACTIONS

Many of the steps the Board finds desirable in bringing change and improvement to keep the apprenticeship training system current are being addressed through existing mechanisms. These steps are of no less importance than those covered under the Board's Recommendations to the Minister, but they are set out under this heading because the actions required can be carried out within existing policies and practices.

Retraining and Upgrading

The strongest message heard by the Board's Task Force on the Future of Apprenticeship was the call for a means to ensure retraining and upgrading opportunities for individuals seeking to cope with change in the workplace. It is a message the Board has heard frequently in its public consultation.

The terms "retraining" and "upgrading" often are perceived to have a similar implication, that being a need for new education and training to cope with changing technology and with changing economic conditions.

For purposes of this report, the Board wishes to make a distinction between the two. "Retraining" is defined for these purposes as new education and training for an individual who has been displaced in his or her employment for reasons of technology and/or economy. An individual displaced because the product of his or her skills has become obsolete, making the skills redundant, may require retraining in entirely new skills so that he or she can find new employment.

In that context, "retraining" becomes more of a social matter to be dealt with in a broader context than apprenticeship.

"Upgrading", in the Board's definition, is training and education which, in one application, brings an individual's skills up to current standards within the trade or craft and, in a further application, enables the individual to develop "specialized" skills covering specific job- or industry-related technology.

"Upgrading" as it relates to the skilled trades covered by apprenticeship training, should be addressed within the context of the existing system. The Board believes further study is required before it can recommend specific policy and action which will successfully meet the need for upgrading opportunity.

Therefore, the Board has initiated a study, in conjunction with the Apprenticeship and Employment Training Programs Branch and will examine various alternatives. It will report its findings to the Minister of Labour at a later date.

Among matters the Board intends to examine are these:

--What "upgrading" activities already have been undertaken at the initiative of employers?

--Should a "super" tradesman qualification be established, with a certificate to recognize each additional "specialization" successfully completed?

--Should a program of "recertification" be developed for those who graduated earlier and wish to bring their skill levels up to current standards?

--Should refresher courses be established for apprentices and journeymen who re-enter their trades during periods of economic growth after having been away from them for some time?

--Who should set up upgrading programs?

--Who should pay the cost of upgrading programs?

--Who should develop the learning packages for the upgrading process?

--Who should regulate, monitor and evaluate such programs?

It is intended by both the Board and the Branch that this study be carried out expeditiously.

Technological Change

Technology is changing the requirements of the workplace. The apprenticeship system is keeping pace in adapting to these conditions. Individuals and employers generally agree that journeymen graduating from the system have received the fundamental training and education upon which to build specialized training that enables them to work successfully with new, specialized technology.

Study participants expressed the view that the system is sufficiently flexible to adapt satisfactorily and with sufficient speed to continue to provide that fundamental training and education in trade skills. And, there is general acceptance that the standards of the certified journeyman coming through the system today are a satisfactory base upon which individual employers can build to meet the requirements of changing technology in the workplace.

There is a need, within the system, to provide programs of upgrading for journeymen who graduated earlier to bring their training and education standards to the level of today's graduates. But the system is not, and should not be, expected to provide job-specific and employer-specific upgrading.

The Board intends to address this situation by adopting a policy statement and communicating it widely to set out clearly that the formal apprenticeship training system under the Apprenticeship Act in British Columbia will be expected to encompass:

a) on-the-job training and technical education to a fundamental level which meets the needs for universal skills of that trade; and

b) upgrading opportunities for earlier graduates to bring their training and education to the levels of current graduates;

and that where specialized training related to specific job and industry requirements and technological developments is required to meet employer needs, the employer will be expected to provide it.

Trade Advisory Committees

The role and effectiveness of the Trade Advisory Committee (TAC) was discussed on many occasions during the study. TACs are comprised of employer and union representatives and others interested in the specifics of apprenticeship in individual trades. Their role is to provide technical advice relative to the content of apprenticeship training.

The Board has addressed questions relating to the effectiveness of the TACs, having updated the terms of reference under which the committees function and having improved the liaison with the TACs so that the Apprenticeship and Employment Training Programs Branch and the agencies providing technical education can be more timely in their response to TAC advice.

The Board will continue to work with the TACs to meet the demands of changing times and to bring about more effective communication between TACs and the institutions which provide technical education to apprentices. As a result of this study, the Board also is asking the TACs to review course outlines with a view to removing outdated content and to ensuring that the technical training covers no more and no less than is required to produce well-rounded journeymen.

REGULATION

Introduction

Government has the responsibility for regulation of the apprenticeship training system in British Columbia as prescribed under the Apprenticeship Act. The Act is administered by the Minister of Labour.

The Minister has assigned responsibility for day-to-day administration of apprenticeship, including supervision, examination and certification to the Apprenticeship and Employment Training Programs Branch. The Branch receives counsel from the Provincial Apprenticeship Board.

In its role, the Board examines various ideas and proposals for change in the way the apprenticeship system functions and makes recommendations to the Branch and to others involved in the delivery of apprenticeship training.

This mechanism, which involves close communication between the Board and the Branch, is effective in dealing with many concerns which can be addressed within established government policy.

It is being employed to deal with a number of concerns raised in the course of the study on the future of apprenticeship, including the following:

a) Entry Standards

Under present regulations, anyone of school leaving age is eligible for an apprenticeship. Most employers today prefer that applicants hold at least a Grade 12 graduation certificate and Grade 10 is a minimum.

The Board has reviewed the question of standards for entry into apprenticeship and has made recommendations. These recommendations are set out in Appendix E.

The Board's Task Force study found no evidence of concern that marginal candidates are entering the system now at the expense of better-qualified candidates.

b) Part-Time Apprenticeship

Some study participants suggested additional skills training might be encouraged through a program of "part time" apprenticeships, where the apprentice works a few hours daily or a few days per week, rather than a full day and a full week.

The apprenticeship system now is sufficiently flexible to accommodate the apprentice and employer in circumstances where only part-time work can be provided. However, the Board does not encourage part-time apprenticeship as a general rule.

c) Apprentice Wage Levels

In many instances, wage levels for apprentices are covered by the terms of collective agreements between employers and trade unions. Where collective agreements are not in force, employers have been required by regulation to pay an apprentice a starting wage which is 50% of the journeyman's rate. Some employers find this level imposes a cost greater than they can afford and, as a result, they do not train.

The Board has recognized that the 50% level may be inhibiting some employers from training and has given the Director of Apprenticeship some flexibility in assessing individual cases and making exceptions. The Board has asked the Director to report on this matter at the end of 1984 and will assess future action following receipt of that report.

d) Validation and Evaluation

The Board's Task Force heard suggestions that the Branch should monitor more closely the practical skills training (on the job) provided by employers to apprentices and should be more directly involved in monitoring the technical education provided and, at present, evaluated by the institutions which provide it.

In part, at least, these suggestions reflect the fact that the major portion of the time spent in an apprenticeship is devoted to practical skills training in the workplace where supervision is provided by the employer, not the Branch or some other independent monitor. It also reflects the fact that some apprentices do not understand that apprenticeship does involve productive work as well as learning on the job.

In the case of technical training, the Board believes any concerns about validation and evaluation would be largely overcome by empowering the Director of Apprenticeship to deal directly with the public educational institutions in contracting for technical training. This would enable the Director to establish suitable and acceptable evaluation procedures directly with the colleges involved.

In the case of on-the-job training, the Board believes present validation and evaluation measures are effective and accepts employer argument that any significant increase on a universal basis in the Branch's monitoring of on-the-job training would be impractical and perhaps counter-productive in terms of cost-effective training.

Much of the concern in this area is being addressed through the work of the Branch, which has developed and continues to develop formal "training guides" which assist the apprentice and the employer in assuring that course content is being covered adequately. The Branch will continue to encourage individual apprentices and employers to make greater use of the training guides. The Board will continue to monitor this question and will recommend further action as it deems necessary.

e) Mandatory Training

It has been suggested that individuals employed to do the work of certain trades be required to be either a certified journeyman, an individual deemed by the employer to be a journeyman and paid as a journeyman, or, if claimed by the employer to be a trainee, an indentured apprentice.

This represents a modification of legislation which, until 1978, required that anyone employed in certain specified trades (designated trades) must be a certified journeyman or an indentured apprentice. That law was removed after arguments that it was too restrictive upon employers and unenforceable.

The goal of those proposing the modified "mandatory training" is to retain the viability of apprenticeship training and protect the best interests of the individual apprentice by insisting that a person employed as a "trainee" in a trade be indentured so that he or she will be sure to receive the necessary technical training and can subsequently be certified.

The Board supports the concept of "mandatory training" in the modified context and, subject to further discussion with the Branch and others, plans to issue a directive identifying trades in which "mandatory training" will be required.

f) Mandatory Certification

It has been suggested that any individual working in a trade covered by the Apprenticeship Act be required to be certified to practice that trade. The issue was discussed by the Board's Task Force, which noted that mandatory certification does exist in six trades (Plumbing, Refrigeration, Sheet Metal, Roofing, Sprinkler Fitting and Steamfitting Pipefitting).

Argument continues as to whether compulsory certification is to protect the public interest or is a valid means to force more training opportunities or is a means to limit competition in certain industries.

The Board is not yet prepared to make a recommendation on this matter, but will discuss it further with various interests and will resolve it through the existing process.

g) Tradesman Qualification Certificates (TQs)

Under the Tradesman Qualification Certificate process, an individual who has worked in a trade for at least one year longer than the precribed apprenticeship time and who successfully passes an examination receives a TQ certificate.

Some concern has been expressed that this process may be subject to misuse as a means to circumvent apprenticeship. The Board has asked its General Issues committee to review, in conjunction with the Branch, the philosophy and process of TQ certification and to bring forward recommendations.

h) The Red Seal Program

The Red Seal Program, established through the co-operation of various provincial governments as a means to accommodate the transfer of trade skills from province to province, enables an individual to become certified to practice his or her trade in any province without requalification.

Study participants expressed a desire to have greater standardization in the apprenticeship training system to accommodate further transferability.

In British Columbia, 22 trades now are covered by the Red Seal Program, which certifies that its recipients have successfully completed skills training to specified basic standards acceptable to all participating provinces. Some variations continue in the course content, reflecting regional differences in Canada, but transferability needs are met.

Joint provincial efforts also have resulted in standardization of technical course content for certain trades and efforts are continuing in this regard. To date, three trades--Millwright, Auto Mechanic and Carpentry--have such courses and two others--Machinist and Plumber--are under study.

The Board believes this process will meet any further needs for national standardization.

i) New Trades

Discussion of the recognition of new trades as apprenticeable under the terms and conditions prescribed by the Apprenticeship Act indicated employers see no significant expansion in this regard in the foreseeable future. Proposals to bring a given vocation under the Apprenticeship Act for training purposes arise periodically.

The Board believes the existing system is fully capable of assessing each proposal on an individual basis and intends to deal with this matter in this way. At the same time, and in the same fashion, the Board intends to review trades within the existing schedules with a view to removing those which are no longer valid in the context of apprenticeship training.

METHODS OF TRAINING

In 1983, when the Board's Task Force began its study of the Future of Apprenticeship, there was a perception that the impact of technology in the workplace would force considerable change in both the content and methods of skills training in British Columbia and that the pace of change would be swift and accelerating.

There is no doubt technology is changing the workplace. The Task Force found, however, a general consensus that:

a) The apprenticeship method of training is, and will continue to be valid;

b) Employers will continue to require people with fundamentally-sound training and education in existing industrial trade skills; and

c) The present apprenticeship training system can, and should be, changed on a continuing and progressive basis to meet the requirements of change in the workplace.

The Board supports this view and will encourage all of those involved in the apprenticeship training system to retain a flexibility which will permit the changing of content and methods to meet the province's needs.

A number of specific questions related to such change in the methods of training were discussed in the course of this study, including the following.

a) The Length of Apprenticeships

Trade Advisory Committees monitor and recommend adjustment to the length of apprenticeship training courses to reflect changes in requirements for a given trade. The length of time required for on-the-job training is not an issue. The system is sufficiently flexible to meet the needs of both employers and apprentices in this regard. In consultation with the Branch, employers now are able to graduate an apprentice in less than the normal prescribed time and also are able to extend an apprenticeship beyond the normal prescribed time.

As technology changes, however, pressure does build to have more time allocated to the technical education component of an apprenticeship; in other words, to add more theory at the expense of hands-on experience.

The Board believes course content in each of the apprenticeable trades requires updating to remain current with technological change and that this is happening effectively within the system.

The Board is of the view, however, that the time allocated to technical education should not be increased, but that it should be managed more effectively to ensure that desirable new material is added and that obsolete materials are dropped.

The Board believes the system is providing a sound and appropriate quality of training within the limits of what can be cost-effective and that the cost of upgrading from this fundamental base should be borne outside of the apprenticeship system.

These views are being communicated to Trade Advisory Committees in the form of a Board directive and the Board will monitor TAC recommendations to see that these guidelines are being followed.

b) Competency-Based Training

Within the apprenticeship system, competency-based training is defined as a means to permit individuals to advance more rapidly to journeyman status where aptitude and learning abilities permit them to meet certification standards in less than the prescribed course time periods.

In the on-the-job training area, the system provides flexibility which allows some acceleration based on the individual's performance. There is less flexibility in the technical education area.

Certification as a journeyman requires that an apprentice meet certain fundamental standards. That is the minimum and the system must ensure that this remains the rule.

The Board believes competency-based criteria should not be imposed upon the training system but that the system should take steps to ensure sufficient flexibility in both hands-on and classroom training to accommodate those who want to take that route.

Such flexibility will offer incentives to individuals who are prepared to undertake self-study programs and other self-paced learning activities over and above that prescribed in the course. It also will offer opportunities to employers who wish to make extra efforts in order to train their employees in a shorter period of time.

The Board is working with the Branch to accomplish this goal.

c) Front-End Loading

In the context of apprenticeship training, front-end loading means taking technical education, generally in the classroom, before going into a job. The degree of front-end loading might range from taking some of the required technical education to taking all of it before employment.

Two of the present trades recognized under the Apprenticeship Act in B.C. employ this practice -- Heavy Duty Mechanics and Welding.

The Board has found no significant demand for its introduction in other trades at this time, but believes it has two distinct potential benefits in meeting the challenge of apprenticeship training in the province.

First, it can be useful where shortages of trade skills develop and there is a need to accelerate the training process to make the apprentice more productive once he or she is on the job.

Second, it can have a value in times of economic downturn when it is combined with simulated hands-on training to provide unemployed individuals with trade skills training that will be marketable when the economy turns up again.

DELIVERY OF TRAINING

Apprenticeship training in British Columbia is delivered for the most part by employers who train and by recognized educational institutions, principally community colleges.

The Apprenticeship and Employment Training Programs Branch of the Ministry of Labour supervises the practical skills (or on-the-job) training, carries out the examinations involved in certification of journeymen and has responsibility for course content, which is kept current in co-operation with the Trade Advisory Committees, employers and educators.

Technical courses are delivered through the Ministry of Education which in effect contracts with the Ministry of Labour to do so and then contracts with community colleges and other educational institutions to provide the in-school instruction. The institutions supervise and evaluate this education.

Generally speaking, the province has been well-served by this system. Nonetheless, the search continues for delivery methods which are more convenient, less expensive and, in the case of the technical education, more flexible in terms of scheduling and location.

A strong desire exists for more locally-based technical education, as already set out in earlier parts of this report. The Board recognizes that this desire has to be weighed against the economic reality of the investments already made in public education institutions around the province. It believes progress in meeting this desire will be made, in a cost-effective way, through the recommendation that the Director of Apprenticeship be empowered to deal directly with the educational institutions for technical training related to apprenticeship.

Distance Learning

"Distance learning" involving the use of such facilities as the KNOWledge Network and the Open Learning Institute were discussed.

These concepts have obvious benefits where self-study is involved. The Board believes they have applications in the technical training component of apprenticeship but are not yet to the point where they can be considered as a total substitute or replacement for the classroom and employer processes in use now.

However, five programs already are being offered by the Open Learning Institute: Heavy Duty Mechanic Module I and four Tradesmen Qualification upgrading programs, Electrical, Heavy Duty Mechanic, Millwright and Auto Mechanic.

The Board will encourage further exploratory work with these techniques so that, where it is cost effective, they can be brought into the mainstream of apprenticeship technical training.

Modular Training

Study participants expressed interest in the development and use of "training modules" in two separate and distinct contexts.

In most cases now, the technical training course content is one complete package. The learning process proceeds through a set sequence which, because of the variations in workplace circumstances, may or may not relate to the on-the-job training sequence.

The idea with modular training is to develop training modules or "learning packages" which together comprise the technical training course content, but which can be learned in random order at the choice of the users (employers and apprentices). All modules have to be covered over the life of the apprenticeship, but there is some flexibility in the sequence in which each "learning package" may be studied, at the user's option.

This system has two distinct advantages. First, the technical training can be related more directly to what the apprentice is learning through on-the-job experiences. Second, the individual who wants to accelerate the learning process can choose a module and learn it through self-study.

The Board supports the concept of modular training, subject, of course, to the requirement that all modules in any given course must be successfully completed in order to qualify for certification. The Board has worked with the Director of Apprenticeship in the development of experimental modules in the Millwright trade.

The Board does not support the concept in which an employer could choose modules on a selective basis, without applying all of the course content. This would remove the apprenticeship system's ability to ensure the training of a whole journeyman with well-rounded fundamental skills.

THE FUTURE OF APPRENTICESHIP

BACKGROUND INFORMATION

British Columbia has had a formal apprenticeship system since 1935, when the province's original Apprenticeship Act was passed by the legislature.

The Apprenticeship Act stands as recognition that the province sees apprenticeship as an important method of skills training--important in terms of individual men and women who seek such training in order to develop marketable skills through which to earn their livelihood and in terms of employers, who need these skills to build business and industry, which are the foundation of the provincial economy.

The significance British Columbians attach to apprenticeship as one of the education and training systems serving the interests of the province was further emphasized in 1979 Apprenticeship Act amendments, which included provision for the creation of the Provincial Apprenticeship Board.

THE PROVINCIAL APPRENTICESHIP BOARD

The Act prescribes certain duties for the Provincial Apprenticeship Board, which is appointed by the Minister of Labour, who has responsibility for the administration of apprenticeship training in British Columbia.

The Board's duties are generally related to determining the qualifications required for entry into apprenticeable trades and to the conditions for develivery of training. But a further principal role of the Board is to monitor apprenticeship developments, consult with the public as to changing needs in this training system and advise the Minister on matters of policy and action.

In this latter role, the Board acts as a link between the public and the government agencies which deliver and administer apprenticeship training. From time to time, since it was appointed in January 1980, the Board has focussed upon specific concerns, including steps to help the system meet demands for trade skills in times of high economic activity and to soften the impact economic downturn has on apprenticeship training.

The Provincial Apprenticeship Board:

Chairman

Claude G. Heywood
Construction Industry Coordinator
Ministry of Labour
Victoria, B.C.

Members

Alexander S. Brokenshire
Retired (formerly Vice-President, Industrial Relations, Tahsis Co. Ltd.)
West Vancouver, B.C.

Donald Fearey
Apprenticeship Coordinator
Joint Apprenticeship and Trade Improvement Committee of the Sheet Metal Industry
Vancouver, B.C.

James A. Gray
General Manager, Administration, B.C. Group
Cominco Limited
Trail, B.C.

Robert J. Jennings
President
Graphic Communications International Union, Local 525
Vancouver, B.C.

Betsy McDonald
F.D.M. Consultants
Human Relations & Communications
Vancouver, B.C.

Jule Morrow
Director, Women's Office
Ministry of Labour
Vancouver, B.C.

Kent Nielsen
General Contractor
Burnaby, B.C.

Nicholas Smith
Staff Representative
B.C. Government Employees' Union
Burnaby, B.C.

Victor Traynor
Executive Vice-President
Mechanical Contractors' Association of B.C.
Burnaby, B.C.

Wyman Trineer
Retired (formerly Secretary-Treasurer, International Woodworkers of America Regional Council #1)
Vancouver, B.C.

Lew Truesdale
Superintendent, Utilities
Alcan Smelters and Chemicals
Kitimat, B.C.

John N. Wynne
Business Manager and Financial Secretary
United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry
Local 170
Burnaby, B.C.

THE TASK FORCE STUDY

In 1983, the Board formed a Task Force comprised of six of its members to review the system, to consult with the people of British Columbia and to report on the future of apprenticeship in this province.

The Task Force began its assignment in March 1983. It discussed apprenticeship with groups and organizations from throughout B.C. in 24 meetings held in various communities. It considered more than two dozen thoughtful submissions from trade unions, educators, employers and government personnel involved in the delivery of apprenticeship training. And it reported to the full Provincial Apprenticeship Board in October 1984.

This report from the Provincial Apprenticeship Board is founded upon the work of that Task Force and upon the experience and knowledge of the members of the Board, who represent a cross-section of trade unions, employers, government and the public at large.

In submitting its report on **The Future of Apprenticeship in British Columbia**, the Board wishes to acknowledge, with sincere thanks, the contribution made by all of those who participated in the study process, and especially that of members of the staff of the Apprenticeship and Employment Training Programs Branch of the Ministry of Labour whose assistance has been invaluable.

The Task Force on The Future of Apprenticeship was comprised of Donald Fearey, Task Force Chairman, and Alexander Brokenshire, James Gray, Nicholas Smith, Lew Truesdale and Claude Heywood. It was assisted by Danny O'Neill, Director of Apprenticeship, and Lyle Viereck, Policy and Planning, Ministry of Labour.

APPENDIX A

Following is a list of meetings in which the Provincial Apprenticeship Board's Task Force on the Future of Apprenticeship took part. Notes of the discussions from all of these meetings, except that with the Canadian Home Builders' Association (B.C. Division), are on file at the Board's offices in Victoria.

Participants	Date
Employers' Council of B.C.	October 20, 1983
Vancouver Board of Trade	February 6, 1984
Forest Industrial Relations & Pulp & Paper Industrial Relations Bureau	February 6, 1984
Canadian Manufacturers' Association (B.C. Division)	March 5, 1984
B.C. Federation of Labour	March 7, 1984
Canadian Home Builders' Association (B.C. Division)	April 2, 1984
Council of Construction Associations	April 4, 1984
B.C. and Yukon Territory Building Trades (Training Coordinators Committee)	April 4, 1984
Vocational Administrators	April 12, 1984
Apprentices	April 30, 1984
Northwest Community College (Terrace)	May 24, 1984
Vocational Instructors	June 4, 1984
College of New Caledonia (Prince George)	June 6, 1984
Okanagan College (Kelowna)	June 6, 1984
East Kootenay College (Cranbrook)	June 6, 1984
Northern Lights College (Dawson Creek)	June 7, 1984
Cariboo College (Kamloops)	June 7, 1984
Selkirk College (Nelson)	June 7, 1984
Camosun College (Victoria)	June 12, 1984
Fraser Valley College (Abbotsford)	June 13, 1984
Malaspina College (Nanaimo)	June 19, 1984
North Island College (Campbell River)	June 20, 1984
North Island College (Port Alberni)	June 21, 1984
Apprenticeship & Employment Training Program Counsellors	July 4, 1984

NOTE: The meetings at the various community colleges included representatives of the colleges, employers, trade unions and others.

APPENDIX B

Following is a list of organizations and individuals from which the Task Force on the Future of Apprenticeship received written submissions:

Robert N. Brady, Department Head, Diesel Mechanics Program, Vancouver community College, King Edward Campus

Brinco Mining Limited (Cassiar Division)

B.C. Hydro

British Columbia Insulation Contractors Association

British Columbia Provincial Council of Carpenters

Canadian Forest Products Ltd.

Council of Marine Carriers

Doug Cross, Tutor-Instructor, North Island College, Comox, B.C.

G.G. Daniels, Area Supervisor, Apprenticeship and Employment Training Programs Branch, B.C. Ministry of Labour

Bob Enright, Area Supervisor, Apprenticeship and Employment Training Programs Branch, B.C. Ministry of Labour

Finning Tractor & Equipment Company Limited

Hodgson Botting Mechanical Ltd.

Houston Forest Products Company

International Brotherhood of Electrical Workers, Local 993, Kamloops

Ironworkers Trade Improvement Committee, Local 97

Lister Bolt & Chain Ltd.

MacMillan Bloedel Limited

C. McConnell, Apprenticeship Counsellor, Apprenticeship and Employment Training Programs Branch, B.C. Ministry of Labour

APPENDIX B CONT'D

Neil McCurdy, Manager, British Columbia Sheet Metal Association (SMACNA-B.C.)

Mearl's Machine Shop, Kelowna

Karl Monk Sash & Door Ltd., Fruitvale, B.C.

Jack Meredith, B.C. Ministry of Education, Post-Secondary Department

Nabob Foods Limited

Noranda Mines Limited

Pacific Western Airlines Ltd.

Prince George & District Building Trades Council

United Steelworkers of America, Local 651

Westar Timber Ltd.

Western Canadian Regional Council #1, International Woodworkers of America

Gail Wilson, Area Supervisor, Apprenticeship and Employment Training Programs Branch, B.C. Ministry of Labour

APPENDIX C

Following are trades as recognized under the Apprenticeship Act of British Columbia: (The names shown here reflect the names in the legislation. The Provincial Apprenticeship Board will be recommending changes in a number of instances to make the names reflect current requirements.)

Schedule A - Designated Trades

Automotive Body Repair
Automotive Mechanical Repair
Automotive Painting and Refinishing
Automotive Parts Warehousing and Merchandising
Automotive Radiator Manufacture and Repair
Automotive Trimming
Barbering
Boilermaking
Boilermaking (Erection)
Bookbinding
Bricklaying
Carpentry
Cement Masonry
Cooking
Domestic Radio and Television Servicing
Drywall Finishing
Electrical Work
Embalming
Floor Covering
Glazing
Hairdressing
Heavy Duty Mechanical Repair
Industrial Electrical Work
Industrial Instrumentation
Ironwork
Jewellery Manufacture and Repair
Joinery (Benchwork)
Lithography
Lumber Manufacturing Industry - Benchman
Lumber Manufacturing Industry - Circular Saw Filer
Lumber Manufacturing Industry - Construction Millwright
Lumber Manufacturing Industry - Saw Fitter
Lumber Manufacturing Industry - Steam and Pipe Fitting
Machinist
Millwright
Moulding
Office Machine Repair
Oil Burner Repair

APPENDIX C CONT'D

Schedule A trades cont'd

Painting and Decorating
Patternmaking
Piledriving and Bridgeman
Plastering
Plumbing
Refrigeration
Roofing, Damp and Waterproofing
Servicing and Repair of Electrical Appliances
Sheet Metal Work
Ship and Boatbuilding
Sign and Pictorial Painting
Sprinkler Fitting
Steamfitting and Pipefitting
Steel Fabrication
Wall and Ceiling Installation
Watch Repair

NOTE: Compulsory certificates of qualification apply to the following trades: Plumbing, Refrigeration, Roofing, Damp and Waterproofing, Sheet Metal Work, Sprinkler Fitting, Steamfitting and Pipefitting

Schedule B Apprenticeable Trades

Aircraft maintenance
Armature Winder
Automotive Machinist
Baking
Cableman
Carman
Cladding
Dental Mechanic
Dental Technician
Diesel Engine Mechanical Repair
Electronics (Audio and Radio Servicing)
Electronics (Community Antenna Television)
Electronics (Industrial)
Electronics (Instrument Repair and Calibration)

APPENDIX C CONT'D

Schedule B Trades cont'd

Electronics (Marine)
Electronics (Panels and Controls)
Electronics (Radio Communications)
Electronics (Telecommunications)
Elevator Mechanic
Gasfitting
Heat and Frost Insulating
Inboard/Outboard Mechanical Repair
Industrial Warehousing
Letterpressman
Lineman
Machinist Fitter
Maintenance Mechanic (Pipeline Industry)
Marine Engine Mechanical Repair
Meat Cutting
Partsman
Plastic and Rubber Fabrication
Practical Horticulture
Power Engineering
Printer
Small Engine Repair
Tile Setting
Tire Repair
Tool and Die Making
Welding

APPENDIX D

DEFINITIONS

Apprentice

An individual indentured to an employer or a joint training board in accordance with the Apprenticeship Act of British Columbia.

Apprenticeship

A system of supervised employment through which an individual learns a skilled trade or occuption by acquiring practical skills through experiences working with journeymen and technical knowledge generally through attendance at technical training classes.

Industry

For the purposes of this report, when the term 'industry' is used it refers to a broad industrial community encompassing employers, employees and labour organizations.

Journeyman

An individual who has successfully completed prescribed practical skills and technical training through an apprenticeship and passed examinations to become certified under the Apprenticeship Act.

Levy Grant System

A system whereby employers contribute a small percentage of their payroll to a training fund. The system would make grants to those firms which conduct or finance recognized training and educational programs at or beyond the level of the payroll percentage.

Mandatory Ratios

A situation where an employer who employs journeymen is required by regulation to employ "x" number of apprentices per "y" number of journeymen.

Modular Training

A system where training programs are broken into a number of modules, or "learning packages" which can be employed to learn any given segment of a course at a time most appropriate to the employer and the apprentices in relation to work experience and practical training.

Retraining

New education and training for an individual who has been displaced in his or her employment for reasons of technology and/or economy.

Tax Credit Plan

The plan would give employers a tax credit for money spent on retraining and upgrading employees.

Training Tax

A tax on employers who do not meet a prescribed level of training.

Upgrading

Training and education which bring an individual's skills up to current standards within a trade or craft or which enable the individual to develop specialized skills covering specific job- or industry-related technology.

APPENDIX E

ENTRANCE STANDARDS

The following standards are recommended for entrance to apprenticeship:

Health

Good general health, ability and capacity to do the job.

Education

The provincial Apprenticeship Board strongly recommends that although the recommended minimum education requirements for some of the skilled trades is successful completion of Grade 10 or equivalent, all students planning to enter the skilled trades strive to complete a Grade 12 education that includes the following courses:

English 12
English Composition 11 (Practical Writing Skills)

Mathematics 10
Algebra 11 and/or Trade Mathematics 11

Science 10
Physics 11

The recommended minimum education requirements for entry into the following trades is successful completion of Grade 10 or equivalent, including English 10, Mathematics 10 and Science 10:

Motor Vehicle Trades

Commercial Transport Vehicle Mechanic
Diesel Engine Mechanic
Heavy Duty Mechanic
Inboard/Outboard Mechanic
Marine Engine Mechanic
Motor Vehicle Body Repairer
Motor Vehicle Mechanic
Motor Vehicle Painter and Refinisher

APPENDIX E CONT'D

Motor Vehicle Trades cont'd

Motor Vehicle Radiator Manufacturer & Repairer
Motor Vehicle Trimmer
Small Engine Mechanic
Tire Repairer

Food Trades

Baker
Cook
Meat Cutter

Machinist/Millwright Trades

Millwright
Pipeline Maintenance Mechanic

Parts Trades

Industrial Engines and Equipment Partsman
Industrial Warehousemen
Motor Vehicle Partsman

Hairstyling Trades

Barber
Hairdresser

Lumber Manufacturing Industry - Saw Trades

Benchman
Circular Saw Filer
Saw Fitter

APPENDIX E CONT'D

Metal Fabrication Trades

Boilermaker
Heat and Frost Insulator
Ironworker
Metal Cladder
Sheet Metal Worker
Shipfitter/Boatbuilder
Steel Fabricator

Electrical Trades

Cableman
Power Lineman

Building Finishing Trades

Drywall Finisher
Floor Covering Installer
Joiner (Benchwork)
Painter and Decorator
Plasterer
Tile Setter
Wall and Ceiling Installer

Building Construction Trades

Bricklayer
Carpenter
Cement Mason
Glazier
Roofer

APPENDIX E CONT'D

Others

Appliance Repairer
Embalmer
Graphic Arts Trademan
Jeweller & Goldsmith
Moulder
Office Machine Repairer
Oil burner Mechanic
Patternmaker
Piledriver & Bridgeworker
Plastic & Rubber Fabricator
Practical Horticulturist
Railway Car Repairer
Watch Repairer
Welder

Education

The recommended minimum education requirements for entry into the following trades is successful completion of Grade 12 or equivalent, including English 12, Algebra 11 and/or Trade Mathematics 11 and Physics 11:

Piping Trades

Gas Fitter
Plumber
Refrigeration and Air Conditioning Mechanic
Sprinkler Fitter
Steamfitter/Pipefitter

Electrical Trades

Electrician
Winder Electrician

APPENDIX E CONT'D

Millwright/Machinist Trades

Machinist
Machinist Fitter
Motor Vehicle Machinist
Tool and Die Maker

Dental Trades

Dental Mechanic
Dental Technican

Electronics & Related Trades

Community Antenna Television Technician
Electronics Technician
Industrial Instrumentation Mechanic
Radio and Television Repairer

Others

Aircraft Maintenance Mechanic
Elevator Mechanic
Marine Engineer
Power Engineer

Only the Provincial Apprenticeship Board may vary these recommended standards to meet the special requirements of a trade, as recommended by a Trade Advisory Committee and the Apprenticeship and Employment Training Programs Branch, Ministry of Labour.

POOR

QUALITY

ORIGINAL